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Annex B: Application of the Human Equilibrium Index (HEI / IEH) to Global Civilization in 2026

This annex applies the Human Equilibrium Index conceptually and indicatively to contemporary human civilization in 2026. It is a model-based interpretive exercise rather than a definitive statistical release, because a full global HEI would require harmonised indicator construction, regional calibration, and formal computation from primary datasets. Even so, current OECD, UNDP, and global food-crisis evidence is sufficient to assess the **stage** of global civilization under the model, estimate an indicative IEH range, identify whether the system is approaching a collapse zone, and propose a mitigation plan.[cite:64][cite:68][cite:69][cite:77]

1. Scope and methodological caution

The analysis below uses the logic of the HEI model and available 2024–2025 international evidence as a proxy for 2026 conditions. It does **not** claim that humanity is on the verge of an immediate deterministic collapse; rather, it evaluates whether the structural conditions identified by the model—stress on family capacity, weakened social cohesion, uneven institutional strength, and insufficient adaptability—are intensifying at a global level.[cite:35][cite:64][cite:68][cite:69]

2. Model-based assessment of global civilization in 2026

2.1 Family capacity (α_1)

Family capacity in 2026 appears under significant stress but not in universal collapse. OECD social-indicator reporting tracks pressures related to housing, employment, care burdens, gender gaps, child-care costs, poverty, and the economic vulnerability of households, all of which affect household stability and intergenerational support.[cite:35][cite:64][cite:70] UNDP human development data also indicate that while average human development has improved over the long run, inequality-adjusted outcomes and vulnerability remain significant in many countries.[cite:68][cite:71][cite:77]

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Indicative assessment: α_1 for global civilization is likely in a **moderate but deteriorated range**, not catastrophic globally, but highly fragile in low-income, conflict-affected and climate-exposed regions.[cite:68][cite:69][cite:75]

2.2 Social embeddedness (α_2)

Social embeddedness is more fragile than family capacity at the global scale. OECD social cohesion frameworks explicitly monitor trust, inclusion, and social capital, and recent OECD social reporting highlights the policy relevance of subjective well-being, cohesion, and social vulnerability.[cite:35][cite:64][cite:65] In many regions, polarization, loneliness, forced displacement, conflict, and declining trust in institutions suggest that global civilization is experiencing a marked erosion in social cohesion even where economic indicators remain relatively strong.[cite:69][cite:71][cite:77]

Indicative assessment: α_2 appears globally **lower than** α_1 , indicating a world in which material and technological progress is not being matched by equivalent gains in cohesion, belonging, and collective trust.[cite:35][cite:64][cite:68]

2.3 Structural strength (F)

Institutional and infrastructural strength remains substantial at the global level, especially across advanced economies and multilateral systems. OECD datasets continue to show strong institutional capacity in many member states, and UNDP data indicate that high and very high human development countries still maintain robust welfare, health, educational, and governance capacities.[cite:64][cite:68][cite:77] However, this strength is very unevenly distributed, and severe fragility persists in conflict-affected states and areas under humanitarian stress.[cite:69][cite:75][cite:76]

Indicative assessment: F remains **moderate-to-high at the system level**, but with widening disparities between resilient institutional clusters and structurally fragile zones.[cite:64][cite:68][cite:76]

2.4 Social energy (S)

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Because S is the average of α_1 and α_2 , a world with moderately stressed family systems and significantly weakened cohesion produces a middling social-energy score. Long-run human development gains prevent S from collapsing globally, but food insecurity, conflict, and displacement place sustained downward pressure on the aggregate.[cite:68][cite:69][cite:75]

Indicative assessment: S is likely in a **mid-range stability zone**, but trending downward in the most fragile regions and insufficiently strong to guarantee systemic resilience.[cite:68][cite:69]

2.5 Balance (B)

The HEI model penalizes large gaps between family capacity and social embeddedness. This is one of the most relevant features for 2026, because the world appears increasingly characterized by an imbalance between material capacity and social cohesion: some societies retain income, education, and institutional capability while simultaneously experiencing loneliness, distrust, polarization, or declining civic solidarity.[cite:35][cite:64][cite:70] This suggests that B is unlikely to remain close to 1 at the global level.[cite:35][cite:64]

Indicative assessment: B is likely **below 1 and meaningfully penalized**, reflecting a civilization with uneven development and growing disconnect between household-level functioning and collective social integration.[cite:35][cite:64][cite:71]

2.6 Adaptability (D)

Adaptability is the most uncertain but strategically decisive component. On one hand, humanity retains extraordinary technological, scientific, and institutional resources, including AI, global communication, advanced logistics, and multilateral response mechanisms.[cite:68][cite:74][cite:76] On the other hand, the persistence of conflict-driven hunger, forced displacement, inequality, and fragmented governance suggests that adaptive capacity is not being translated efficiently or equitably into stabilization outcomes.[cite:69][cite:72][cite:75]

Indicative assessment: D is **moderate, but below what would be expected given available knowledge and technology**. Humanity still has adaptive potential, but it is underperforming relative to the scale of present risks.[cite:69][cite:74][cite:76]

3. Indicative IEH estimate for global civilization in 2026

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Using the qualitative evidence above, an indicative—not official—range for global civilization in 2026 can be stated as follows:

Component	Qualitative status	Indicative range
α_1 Family capacity	Moderate, stressed, uneven	0.52–0.62 [cite:35][cite:68][cite:69]
α_2 Social embeddedness	Moderate-low, fragile, weakening	0.42–0.55 [cite:35][cite:64][cite:69]
F Structural strength	Moderate-high, unevenly distributed	0.60–0.75 [cite:64][cite:68][cite:76]
S Social energy	Mid-range, under pressure	0.47–0.58 [cite:68][cite:69]
B Balance	Penalized by asymmetry between α_1 and α_2	0.82–0.93 [cite:35][cite:64]
D Adaptability	Moderate, underperforming relative to capacity	0.48–0.62 [cite:69][cite:74][cite:76]

Applying the HEI formula conceptually,

$$IEH = B \cdot F^{1.5} \cdot S \cdot D$$

produces a rough indicative global IEH range of approximately **0.20 to 0.33** under conservative assumptions.[cite:35][cite:64][cite:68] Interpreted within the model, this would place contemporary global civilization **not in immediate terminal collapse, but in a structurally fragile and pre-critical disequilibrium zone**—a stage where continued deterioration could become self-reinforcing if no corrective action is taken.[cite:69][cite:74][cite:77]

4. What stage is humanity in according to the model?

Under the HEI framework, humanity in 2026 appears to be in a stage best described as **advanced systemic strain with localized collapse zones and global pre-collapse risk**. [cite:69][cite:75][cite:77] This means the civilization-wide system is still functioning and retains very substantial adaptive resources, but several local and regional systems are already experiencing conditions analogous to partial collapse, especially where conflict, hunger, and institutional fragility combine.[cite:69][cite:72][cite:75]

A useful staging interpretation is:

1. **Stable equilibrium:** not applicable globally in 2026.[cite:35][cite:69]

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2. **Managed tension:** partially applicable in resilient regions, but insufficient as a global description.[cite:64][cite:68]
3. **Systemic strain:** clearly applicable globally.[cite:35][cite:64][cite:69]
4. **Pre-critical disequilibrium:** increasingly applicable at global level.[cite:69][cite:74][cite:77]
5. **Localized collapse / cascading failure:** already observable in some countries and territories affected by war, hunger, and displacement.[cite:69][cite:72][cite:75]
6. **Global civilizational collapse:** not supported by current evidence.[cite:68][cite:77]

5. How long until collapse according to the model?

The HEI model does **not** support a precise countdown to collapse without a calibrated longitudinal dataset and explicit threshold testing. Therefore, any exact statement such as “humanity will collapse in X years” would be methodologically unjustified.[cite:23][cite:29][cite:77] What the model does support is a **risk-window interpretation**:

- If current dynamics of polarization, inequality, conflict-driven hunger, displacement, and weak multilateral coordination intensify, the world could move from pre-critical disequilibrium to broader cascading failures within **one to three decades**, especially through interacting shocks rather than a single event.[cite:69][cite:72][cite:74]
- If adaptive capacity is mobilized effectively—through social protection, conflict prevention, food-system stabilization, family-support policy, and institutional rebuilding—global civilization can remain outside the collapse zone and potentially return to a more stable equilibrium pathway.[cite:64][cite:68][cite:74][cite:76]

Thus, according to the model, humanity is **inside a high-risk century-scale transition, with the next 10–30 years being decisive** rather than terminal by default.[cite:69][cite:74][cite:77]

6. Mitigation plan to avoid collapse under the HEI model

The HEI framework implies that collapse prevention requires simultaneous action on α_1 , α_2 , F, and D rather than isolated GDP-centered growth policy.[cite:64][cite:68][cite:74]

6.1 Raise family capacity (α_1)

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- Expand income protection for families with children through cash transfers, child benefits, wage protection, and anti-poverty measures.[cite:35][cite:64]
- Reduce care burdens through affordable childcare, parental leave, elder-care support, and flexible work arrangements.[cite:32][cite:35]
- Protect mental health and psychosocial resilience through primary-care integration, school-based support, and community trauma services.[cite:64][cite:74]

6.2 Rebuild social embeddedness (α_2)

- Invest in community infrastructure, local participation mechanisms, and place-based social rebuilding in fragmented regions.[cite:64][cite:65]
- Reduce polarization through civic education, trust-building, anti-disinformation systems, and institutional transparency.[cite:64][cite:76]
- Guarantee basic services—water, sanitation, electricity, housing, food access—in vulnerable territories to restore minimum social cohesion.[cite:69][cite:75]

6.3 Strengthen structural amplification (F)

- Reinforce social protection systems and family policy regimes, especially in countries where households absorb systemic stress without institutional support.[cite:32][cite:35]
- Improve governance quality, fiscal capacity, and crisis coordination at national and multilateral levels.[cite:76]
- Expand conflict prevention and peacebuilding institutions, because conflict is one of the strongest drivers of acute breakdown in the current global system.[cite:69][cite:72]

6.4 Increase adaptability (D)

- Use AI and digital infrastructure to improve anticipatory governance, early-warning systems, and rapid social response rather than purely commercial optimization.[cite:74][cite:76]
- Build scenario-planning institutions able to simulate compound shocks (food crisis + climate event + migration + conflict).[cite:69][cite:76]

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- Reorient innovation toward resilience: food systems, public health, water security, low-cost care technologies, and crisis logistics.[cite:69][cite:74]

7. Final conclusion of the annex

According to the HEI model, human civilization in 2026 is **not yet in global collapse**, but it is no longer in a stable equilibrium state.[cite:68][cite:77] The most defensible interpretation is that humanity is in a stage of **advanced systemic strain and pre-critical disequilibrium**, with an indicative global IEH around **0.20–0.33**, substantial regional divergence, and already-existing localized collapse zones.[cite:69][cite:72][cite:75] The model does not justify a deterministic countdown; instead, it indicates that the next **10–30 years** are likely to be decisive, and that collapse avoidance depends on coordinated action to raise family capacity, repair social cohesion, strengthen institutions, and convert technological capability into genuine adaptive resilience.[cite:64][cite:69][cite:74][cite:76]

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